

RCA

Models: RT2250
RT2250R

FCC Information

This device generates and uses radio frequency (RF) energy, and if not installed and used properly, this equipment may cause interference to radio and television reception.

This equipment has been type tested and found to comply with the specifications in Subpart J of Part 15 of FCC Rules. These rules are designed to provide reasonable protection against radio and television interference in a residential installation. However, there is no guarantee that interference will not occur in particular installations.

If this equipment does cause interference to radio or television reception (which you can determine by turning the equipment off and on), try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna (that is, the antenna for the radio or television that is "receiving" the interference).
- Move the unit away from the equipment that is receiving interference.
- Plug the unit into a different wall outlet so that the unit and the equipment receiving interference are on different branch circuits.

If these measures do not eliminate the interference, please consult your dealer or an experienced radio/television technician for additional suggestions.

Also, the Federal Communications Commission has prepared a helpful booklet, "How To Identify and Resolve Radio TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, DC 20402. Please specify stock number 004-000-00345-4 when ordering copies.

For Your Safety

The AC power plug is polarized (one blade is wider than the other) and only fits into AC power outlets one way. If the plug won't go into the outlet completely, turn the plug over and try to insert it the other way. If it still won't fit, contact a qualified electrician to change the outlet, or use a different one. **Do not attempt to bypass this safety feature.**

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

For Your Records

In the event that service should be required, you may need both the model number and the serial number. In the space below, record the date and place of purchase, and the serial number:

Model No. RT2250/ RT2250R

Remote Control No. CRK76

Date of Purchase



Place of Purchase

Serial No.

Service Information

This product should be serviced only by those specially trained in appropriate servicing techniques. For instructions on how to obtain service, refer to the warranty included in this Guide

WARNING : TO PREVENT FIRE OR ELECTRICAL SHOCK HAZARD, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE .

 <p>THE LIGHTNING FLASH AND ARROWHEAD WITHIN THE TRIANGLE IS A WARNING SIGN ALERTING YOU OF DANGEROUS VOLTAGE WITHIN THE PRODUCT.</p>	<p>CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN</p> <p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>	 <p>THE EXPLANATION POINT WITHIN THE TRIANGLE IS A WARNING SIGN ALERTING YOU OF DANGEROUS ELECTRICAL VOLTAGE WITHIN THE PRODUCT.</p>
<p>SEE MARKING ON BOTTOM/BACK OF PRODUCT</p>		

Contents

FCC Information

Getting Started

- Unpacking the Receiver2
- Inserting batteries into remote control2
- Set up and Maintenance of the Receiver2
- Connecting to Audio-Visual Components3
- Connecting the Antennas5
- Connecting the Speakers5
- Connecting the Subwoofers5
- Positioning your Speakers6
- Connecting for Power7
- Using Headphones7
- Demo Mode7
- Restore to Factory Settings7

Operating your Receiver

- Receiver Controls8
- Your Remote Control9
- The Built-in Radio10
- Seek Tuning10
- Storing and Recalling Stations in Memory ..10
- Using the Receiver to Play DVD/ CD/
Video Cassette Player10
- Using the Remote to Control
Additional Components10

Advanced Sound Control

- Dolby Pro Logic and Dolby 3 Stereo11
- 5.1 ch Input for Dolby Digital11
- Stereo11
- DSP12
- Night Mode12
- Fine Setting of the Components12
- Input IQ12
- Input Signal Setting12
- Fine Setting of the Speakers12
- The **TEST/ SET UP** button12
- Speaker Configurations12
- Speaker Distance13
- Speaker Icons13
- Displaying Program Formats13

Care and Maintenance

- Troubleshooting Tips14
- Receiver/Tuner Operation14
- Remote Control Operation14
- General14
- Cleaning the Exterior14
- Equipment Specifications14

Remote Codes

- Cable Codes15
- VCR Codes15
- TV Codes16
- Satellite Receivers17
- Audio (RCA only)17
- Laserdisc Players17

Index18

US Warranty19

Canadian Warranty20

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Getting Started

EN Unpacking the Receiver

For RT2250 & RT2250R, check that you received the following items:

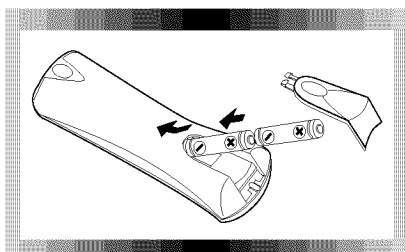
- one receiver unit;
- one RCA Universal Remote Control (CRK76);
- one external FM Dipole antenna;
- one external AM loop antenna;
- one audio cable (two wires) with red and white RCA connectors;
- one video cable (single wire) with yellow RCA connectors;
- one instruction book;
- one safety leaflet;
- and one pair of AA batteries.

For RT2250, you also received:

- one set of speakers including 2 left and right front speakers, 1 centre speaker, 1 subwoofer and 2 left and right rear speakers.
- 6 speaker cables including:
 - 2 x red/ black cable for front speakers,
 - 1 x blue/ black cable for centre speaker,
 - 1 x brown/ black cable for subwoofer &
 - 2 x grey/ black cable for rear speakers.

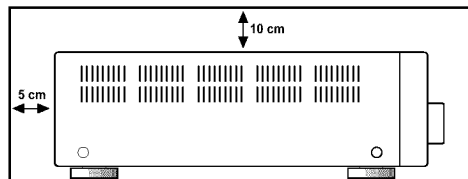
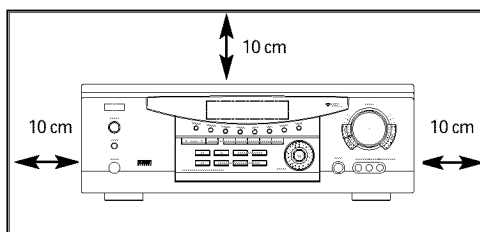
Inserting Batteries into Remote Control

Insert two AA(R6) batteries according to the + and - signs on the battery compartment. To use the remote control, point it directly at your receiver.



Set up and Maintenance of the Receiver

- Provide spaces for sufficient ventilation as indicated:



- Do not connect to the AC power cords until all connections are completed.
- Do not use your set immediately after transferred from a cold place to a warm place: there is risk of condensation.
- Do not expose your set to water projections and excessively high temperatures.
- After having disconnected your set, clean the case with a soft cloth, or with a slightly humid chamois leather. Never use strong solvents.

Getting Started

EN

Connecting to Audio-Visual Components

This receiver allows you to connect to a large variety of audio or video components.

Before you Connect

- Protect components from power surges.
- Connect all components before plugging any power cords into the wall outlet.
- Always turn off the receiver and/or components before you connect or disconnect any cables.
- Contact consumer relations if you have questions concerning the connections or components.

Note: Always make sure that color-coded pins match the color of the terminals in which they are inserted. The connection cable plugs and jacks are color-coded as follows:

Speaker Terminals: RT 2250 - Red/Black (Main Speakers), Blue/Black (Center Speaker), Grey/Black (Rear Speakers) and Brown/Black (subwoofer).
RT2250R - Red/ Black (Main, Center & Rear Speakers)

RCA Phono Type Terminals: Red for the right (R) channel. White for the left (L) channel. Yellow for the video. Black for the powered subwoofer.

Positioning the Cables

Cables should be positioned correctly to avoid audio hum or interference. Below are a few suggestions:

- Insert all cable plugs into their jacks firmly.
- Place audio/video cables to the sides of the receiver's back panel instead of straight down the middle after you have connected the components.
- Try not to coil any power cables and keep them away from the audio/video cables as much as possible.
- Make sure all antennas and cables are properly grounded.

Protect your Components from Overheating

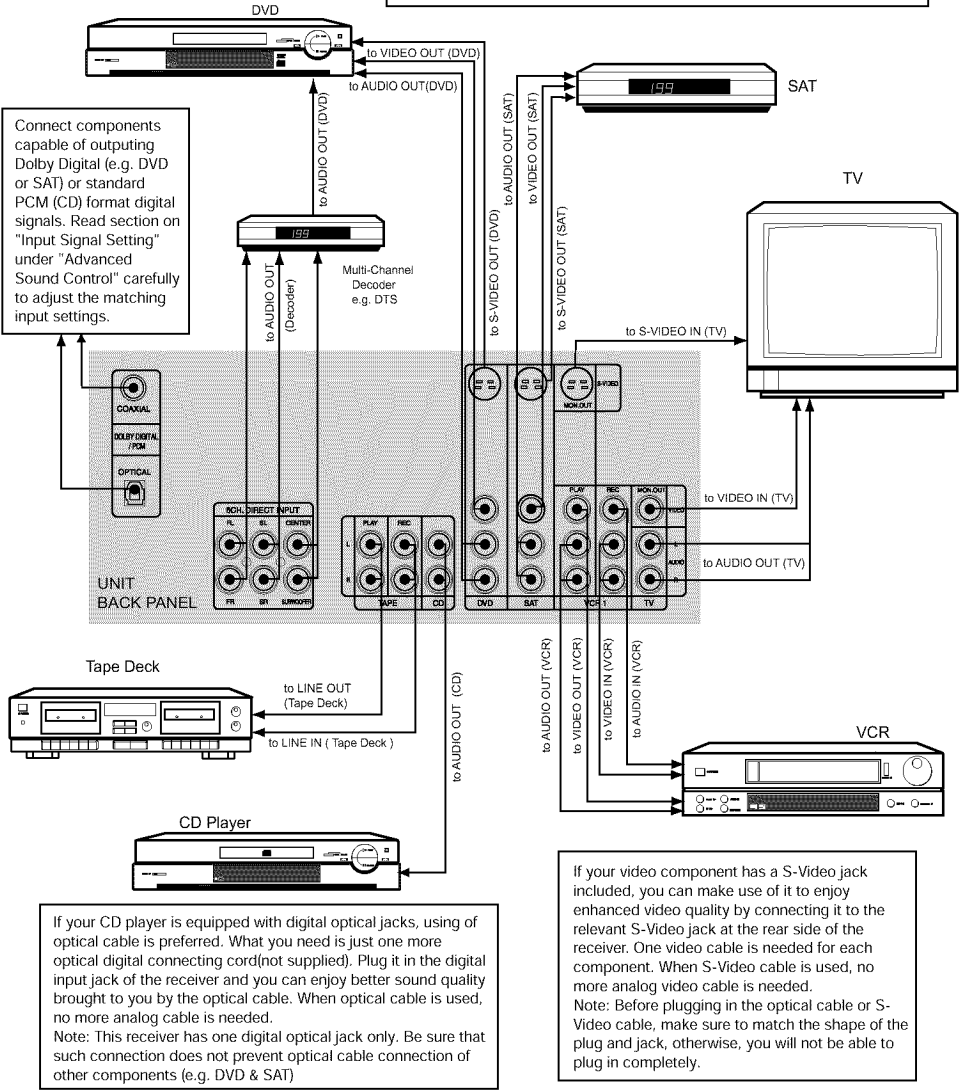
- Do not block ventilation holes in any component. Arrange the components so that air can circulate freely.
- Do not stack components directly on top of each other.
- Allow adequate ventilation when placing your components in a stand.
- Place an amplifier near the top shelf of the stand so heating air rising from it will not affect other components. If you have a satellite receiver, you should place it on the top shelf.

Getting Started

EN Connecting to Audio-Visual Components

Remark: If you have a video camera, video game machine, or an extra VCR, connect it to VCR 2 jack at the front of the receiver.

If you have a SAT receiver or DVD player, you can make use of an optical digital connecting cord (not supplied) or coaxial digital connecting cord (not supplied) to enjoy Dolby Digital sound quality. One optical / coaxial cable is needed for each SAT receiver / DVD player. When optical or coaxial cable is used, no more analog cable is needed.
 Note: This receiver provides one optical and one coaxial digital input for the connection of your auxiliary components. Please connect your components (e.g. DVD, SAT or CD) to the appropriate digital inputs and press SET/ DEMO and then rotate MULTI JOG to match your connection.

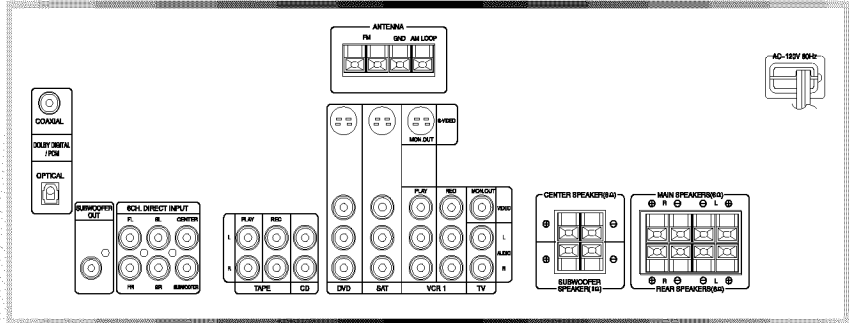


Connect components capable of outputting Dolby Digital (e.g. DVD or SAT) or standard PCM (CD) format digital signals. Read section on "Input Signal Setting" under "Advanced Sound Control" carefully to adjust the matching input settings.

If your CD player is equipped with digital optical jacks, using of optical cable is preferred. What you need is just one more optical digital connecting cord(not supplied). Plug it in the digital input jack of the receiver and you can enjoy better sound quality brought to you by the optical cable. When optical cable is used, no more analog cable is needed.
 Note: This receiver has one digital optical jack only. Be sure that such connection does not prevent optical cable connection of other components (e.g. DVD & SAT)

If your video component has a S-Video jack included, you can make use of it to enjoy enhanced video quality by connecting it to the relevant S-Video jack at the rear side of the receiver. One video cable is needed for each component. When S-Video cable is used, no more analog video cable is needed.
 Note: Before plugging in the optical cable or S-Video cable, make sure to match the shape of the plug and jack, otherwise, you will not be able to plug in completely.

Getting Started



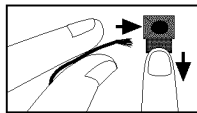
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Connecting the Antennas

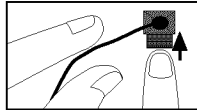
The AM and FM antennas connect to the AM and FM terminals on the system's back panel. They must be hooked up in order to receive clear reception. Uncoil the antenna wires and locate the bare ends. Press down on the tab to open the terminal and insert the wire. Snap the tab closed. After connecting

the antennas, extend them to their full length and adjust their positioning for better reception.

Antenna and Speaker Wire Connection



Push Speaker terminal tab down to insert wire.



Release tab to lock wire in the terminal.

NOTE: Make sure the insulation is completely removed from the ends of the Antenna and speaker wires at all connection points.

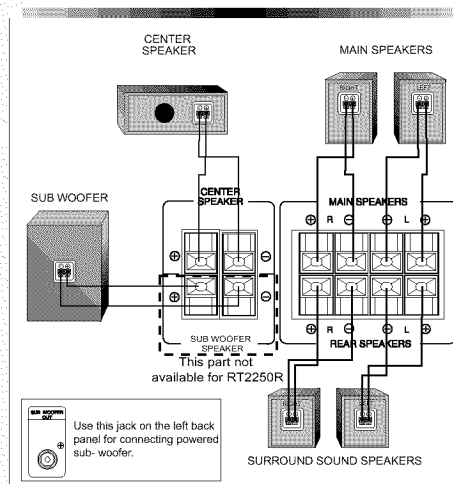
Connecting the Speakers

At least two front speakers (left and right) are required. For better sound quality, Center speaker, rear speakers and Subwoofer are preferred. Adding center and rear speakers will enhance surround effects. Adding a Subwoofer will increase bass response.

If you want to enjoy full range of sound effects, with small speakers, it is a must to use the subwoofer with the speakers to maintain adequate bass signal for the surround sound effect.

Speaker cords, 1 for each speaker, are needed for connection. Twist the stripped ends of speaker cord about 2/3 inch (15 mm). Press down on the tab to open the terminal and insert the wire. Snap the tab closed. To ease speaker connections, the speaker cords and the terminals are color-coded into:

Red/Black (Main Speakers), Blue/Black (Center Speaker) and Grey/ Black (Rear Speakers). When connecting the speakers, make sure the colors of speaker wires and terminals are matched. If the cords are reversed, the sound will be distorted and will lack bass.



Connecting the Subwoofer

For RT2250, connect the subwoofer with the audio cord (brown/ black) provided. For RT2250R, or if you want to connect your own powered subwoofer, a monoaural audio cord (not supplied) is needed.

This receiver offers a high flexibility for user to use a large variety of speakers and subwoofers. For more information please refer to section "Fine Setting of the Speakers" in "Advanced Sound Control" on page 12.

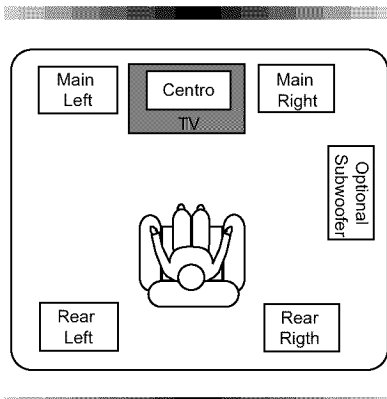
Getting Started

EN Positioning your Speakers

Your system is equipped with Dolby Digital, which enables the unit to reproduce sound effects as they were intended. However, the speakers must be properly positioned and balanced.

In order to enjoy Dolby-enhanced sound quality, five speakers are preferred: One center speaker, left and right main speakers, rear left and right speakers, and an optional subwoofer. However, if your front speakers are small speakers, then a subwoofer is essential or you will not be able to enjoy enhanced bass effects. Below are a few suggestions for the set up:

1. The two main speakers should be set between six and ten feet apart. Putting them any closer or farther apart may result in less satisfactory sound.
2. Try to align center speaker and two main speakers, or set the center speaker slightly behind the left and right main speakers, otherwise the surround effect may be less satisfactory.
3. Aim the rear speakers directly at the two main speakers, matching height to height. If the room is sparsely decorated, slightly tilt the speakers down to increase sound quality. If the room is densely decorated, face the speakers towards the rear wall at the ceiling.



Actually there are many more possible options. You may experiment repeatedly to find a right balance for you.

For more information on speaker setup, please refer

to "Fine Setting of the Speakers" on page 12 & "Speaker Distance" on page 13



Dolby Digital

Manufactured under license from Dolby Laboratories.

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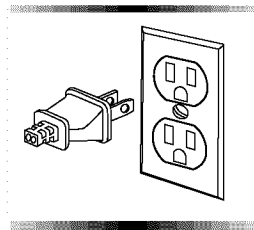
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Getting Started

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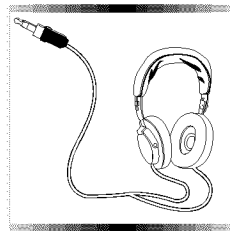
Connecting for Power

Make sure you connect all your other electronic components and the speakers before plugging your receiver into the outlet. Plug the power cord in the wall outlet, matching the wide blade of the plug with the wide slot in the outlet. Be sure to insert the plug completely.



Using Headphones

To listen privately through your audio system, use the **PHONES** jack on the receiver. However, make sure you turn down the volume before you put on the headphones. Increase the volume to the desired level after headphones are in place.



Once headphones are connected, "**HEADPHONE DOWNMIX 2 CHANNEL**" will scroll on display.

Demo Mode

Right after you have plugged in the power, a demo message will appear in display. It will also be displayed if you press the **SET/DEMO** at **STANDBY** mode or press a source button (like CD) but then leave all buttons untouched for 30 seconds. To restore to normal status, press **SET/DEMO** again to return to **STANDBY** mode.

Restore to Factory Settings

You can always restore all settings back to original state. When the receiver is in **STANDBY** mode, press accordingly as:

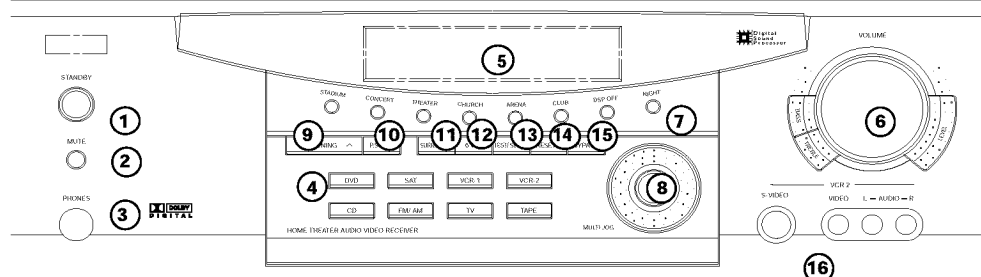
STADIUM → NIGHT → DSP OFF → CLUB

then you can restore everything like preset radio station frequencies, speaker settings, etc, back to the first time you use it.

Note: As you turn on the receiver, it will first enter **TUNER** mode and show frequency as 87.5MHz after the settings have been restored.

Operating your Receiver

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Receiver Controls

1. STANDBY

To turn the unit on/ off. When the system is turned on, the unit will go to the mode it was in before power off.

2. MUTE

To mute all audio outputs.

3. PHONES

Plug your headphones (not supplied) into it for your private enjoyment. Speakers will be off when phones are inserted.

4. Source Buttons

To select sound source. For example, **CD**, **SAT** etc. In standby mode, they are also *One Touch Power On* keys to turn on the receiver directly at the source mode you want.

5. Display

To display current status of the receiver.

6. Sound Control

Let you adjust the sound – volume, treble, bass & balance. To change the **VOLUME**, turn the large central knob. To adjust **TREBLE** or **BASS**, press relevant button and turn the knob. To change the volume of individual speaker, press **LEVEL** button repeatedly to select the speaker, then turn the knob to adjust the level. (refer to "The **TEST/ SET UP** button" on page 12.)

7.DSP (Digital Sound Processor) & NIGHT mode

Press corresponding button to select the mode (**STADIUM/ CONCERT/ THEATER/ ARENA/ CHURCH/ CLUB/ OFF**) you want. Press **NIGHT** for your enjoyment at night (see page 12).

8. MULTI JOG, SET/DEMO

When pressing the **SET/DEMO** repeatedly, the display will toggle among *Audio Source* (for DVD, SAT & CD), **SLEEP** mode and **DIM** selection.

Please refer to page 12 for *Input Signal Setting*. In **SLEEP** mode, you can set the receiver to turn off after 30, 60, 90 or 120 minutes. In **DIM** selection, you can rotate to set the brightness of the display. Such setting will be stored. Also use the **MULTI JOG** for speakers and sub-woofers setup and preset radio stations selection.

9. TUNING

Press to select the tuner frequencies manually.

10. P. SCAN (Preset Scan)

Press for about 2 seconds and tuner station presets will be started automatically.

11. SURREAL MODE

Press repeatedly to select the surround mode you want. (refer to "Advanced Sound Control" on page 11.)

12. 6 CH (6 Channels)

Press to select the input connected to an external 6-Channel decoder. Press again to return to the most recently selected source mode. (see "5.1 ch Input for Dobby Digital" on page 11).

13. TEST/ SET UP

When pressing it briefly, a short noise (test tone) will be generated in the speakers one by one so that you can adjust the volume of individual speaker. When keep pressing for two seconds, it will enter setup mode for speakers and subwoofers. Rotate the **MULTI JOG** to choose the options. (refer to "The **TEST/ SET UP** button" on page 12.)

14. PRESET EQ

Press repeatedly to select the desirable EQ mode (music style) – **CLASSIC**, **POP**, **ROCK**, **JAZZ**, **VOCAL** or **FLAT**. Your choice will be saved automatically.

15. BYPASS

Press to cut sound output from center, surround & subwoofer speakers.

16. VCR2

For convenient use of your digital camera, family game machines, second VCR, etc.

Note: If your video component has S-Video output, you can enjoy enhanced video quality by connecting it to the S-Video jack on receiver using a S-Video cable (not included).

Operating your Receiver

Your Remote Control

Please be sure you have inserted the batteries into the remote control (see relevant section on page 3.) You can test it by pressing any button. If it works, the red LED will light.

1. ON/OFF

To turn on or off the receiver and other auxiliary components (see page 10 "Using the Remote to Control Additional Components").

2. Source Buttons

To turn on and select various audio/ video sources. You can also enter the 6 Channels direct input mode by pressing **DVD•6CH**.

3. CH+, CH- (Channel Buttons)

To select programmed stations (in **TUNER** mode).

4. VOL (Volume Buttons)

To adjust the volume.

5. MUTE

To mute all audio outputs.

6. Adjustment Buttons

Press **AUDIO** button to activate the control, then upon pressing **OK**, the display will toggle among **Preset EQ** (Stereo only), **SLEEP Mode & DIM Mode**. When the display shows the setup you want to change, press the left and right arrow buttons beside **OK** button to make changes, then press **OK** to finalize your choice.

7. Number Buttons

To access directly a pre-set station (in **TUNER** mode).

8. MENU

Press to store desired frequency in memory. The flashing word **MEMORY** in red will appear in display. Input your desired channel num-

ber while the word is still flashing and the frequency will be stored. (For details, refer to "Storing and Recalling Stations in Memory" on page 10.)

9. Operation Buttons

In **TUNER** mode, you can press **REVERSE** and **FORWARD** keys to tune down or up the radio frequency. **PLAY**, **RECORD**, **STOP** and **PAUSE** keys are for easy control of components (like CD, TV, DVD, TAPE, etc.) other than the receiver itself. What you need is to encode the components in advance. (For details, refer to "Using the Remote to Control Additional Components" on page 10.)

10. DIGITAL

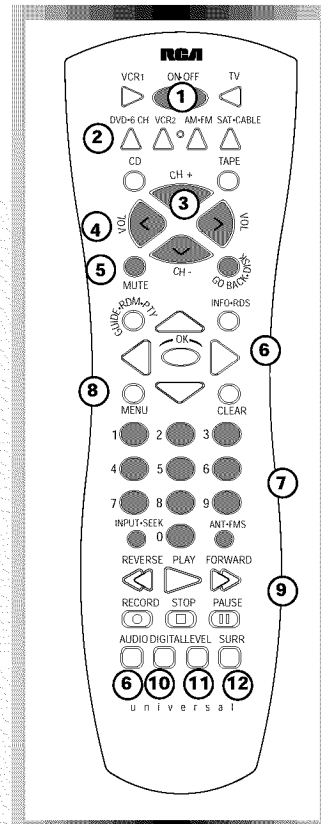
Select the way your audio/video components are connected to the receiver - Analog, Optical, or Coaxial.

11. LEVEL

Press to adjust the volume of individual speaker. Press repeatedly and the display will toggle among different channels (Left main speaker, Right main speaker, Center speaker, Left surround speaker, Right surround speaker, and/or Subwoofer, if available), then press the left and right arrow buttons beside **OK** button for adjustment.

12. SURR (Surround Sound Control)

Press to change the surround



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sound settings. The display will toggle among **DOLBY DIGITAL**, **DOLBY PRO LOGIC**, **DOLBY 3 STEREO**, **STEREO** and **DSP** modes.

(For details, refer to section "Advanced Sound Control" on page 11.)

Note: The remote buttons **GO BACK•DISK**, **GUIDE•RDM•PTY**, **INFO•RDS**, **CLEAR**, **INPUT•SEEK** & **ANT•FMS** do not work with the receiver.

Operating your Receiver

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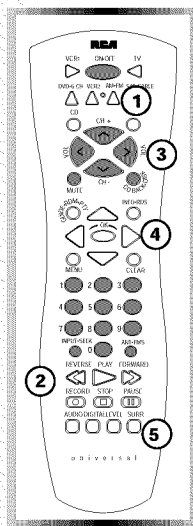
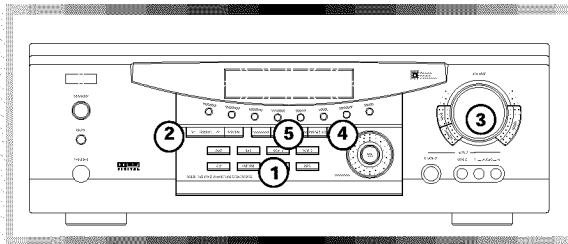
The Built-in Radio

The receiver has built-in AM/FM radio function. You can simply connect it to power and speakers to listen to your favorite radio stations.

1. Select **TUNER**.
2. Tune to your favorite station.
3. Adjust volume.
4. Set preset EQ if needed
5. Set surround mode if needed.

Seek Tuning

You can keep pressing one of the **TUNING** buttons on the unit or **REVERSE/FORWARD** buttons on the remote for a second, and the receiver will search for the next available station for you.



Storing and Recalling Stations in Memory

Set to desired frequency by the receiver or remote

control, then press **MENU** on the remote control. The flashing word **MEMORY** in red will appear in display. While the word **MEMORY** is still flashing, input your desired channel number and the frequency will be stored.

Tip: You can store up to 30 stations.

After you have done so, you can rotate the **MULTI JOG** on receiver or press **CH+** or **CH-** buttons on remote to select the preset stations directly.

Note: The **CH+** and **CH-** buttons respond only in **TUNER** mode in case you want to switch channels.

Using the Receiver to Play DVD or CD or Video Cassette Player

After you have connected your DVD or CD or VCR player with the receiver, you can partly control them through your receiver:

1. Connect the DVD or CD or VCR player with the receiver. (For details, refer to page 4.)
2. Select **DVD** or **CD** or **VCR** according to the source connected.
3. Turn on the connected player and start playback.
4. Set Preset EQ if needed. (For details, refer to item 11 "Preset EQ" on page 8.)
5. Set Surround Mode if needed. (For details, refer to "Advanced Sound Control" on page 12)
6. Set Night Mode if needed. (For details, refer to "Night Mode" on page 12.)
7. Adjust Volume.

Using the Remote to Control Additional Components

You can set your remote to control other components (like CD, TV, DVD, TAPE, etc.). What you need is to encode them in advance (not necessary for recent RCA & Proscan models)

1. Turn on the component to be programmed.
2. Look up the brand and corresponding code number in the code list from page 15 to 17.
3. While keeping the corresponding Source Button (like **VCR1**, **VCR2**, **TV**, **DVD**) on the remote pressed, enter the code from the code list through the Number Buttons.
4. Release the component button, then press **ON-OFF** to see if the component will be turned off.
5. If this does not work, repeat steps 3 and 4 by trying to use the next code (if available) listed for the brand of your component until the component responds to

Operating your Receiver

the remote command.

Note: Once your component is encoded, you can press **ON/OFF** on the remote once to turn off the component and then followed by the second time quickly to turn off the receiver (i.e. this unit). If you only want the receiver to be turned off, select **FM/AM** while the unit is ON before pressing **ON/OFF**.

Tips:

This remote may not operate all models of the brands shown.

If batteries are removed from the battery compartment of the remote control, all memory will be lost. You need to re-enter all previously programmed codes again.

The buttons on the remote may not work correspondingly with those on the components brands. Experiment with the remote and your components to see which buttons work. If only a few functions operate, check to see if another code set will work with more buttons.

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Advanced Sound Control

Sound Enhancement Systems

This receiver is equipped with several built-in sound enhancement systems to give you the sound quality you have once dreamed of – but now comes true:

Dolby Pro Logic and Dolby 3 Stereo

This surround system reproduces theater-like surround sound from Dolby-encoded software. The **Pro Logic** mode uses the built-in circuit to steer the Left, Center, Right and Surround channel audio signals and uses all five speakers and an optional subwoofer to play decoded Dolby Pro Logic program source, such as TV and VCR. The **3 Stereo** mode will redirect the Surround signals to the front left and right speakers when only the front and center speakers are used.

Use this mode to suit your speaker system configurations (such as size and number of speakers) and type of program (such as VCR).

5.1 ch Input for Dolby Digital

The Dolby Digital mode lets you enjoy full digital surround from software processed in the Dolby Digital format. Dolby Digital provides better sound quality and more powerful presence than conventional Dolby Surround.

When the soundtrack of a Dolby Digital movie was made, all the sound effects are mixed down to six sep-

arate channels of digital audio, and these six channels of independent digital audio are pressed to a single stream of digital data on your DVD. When you play it by your DVD player, the receiver decodes this stream of digital data back to six audio channels for playback. Dolby Digital is optimal for DVD and SAT.

This unit is equipped with Dolby Digital 5.1-channel input terminal so that you can enjoy enhanced full digital surround sound. Being different from Dolby Pro Logic in which only four channels (Front Left, Front Right, Centre and Rear) are used, the new system provides stereo separation of the rear speakers (Rear-Right, Rear-Left). These 5 channels, together with the subwoofer channel for bass sounds (counted as 0.1 channel), constitute as 5.1-Channel (or 6 Channels) Input for Dolby Digital that brings you the most sophisticated sound enjoyment.

Press **6 CH** on the unit or **DVD•6 CH** button on the remote to select the input connected to an external 6-channel decoder. Press again return to the most recently selected mode. You can only adjust Sound Control, **SLEEP** mode, **DIM** selection, Source Buttons and **MUTE** when this mode is selected.

Stereo

The Stereo mode uses the two main channel outputs from the front speakers. Use this mode if you have connected the front speakers only.

Advanced Sound Control

EN DSP (Digital Sound Processor)

These digital sound effects resemble sounds in a real environment such as Stadium, Concert, Theater, Arena, Church, Club. **DSP** automatically converts analog audio signals to digital ones which enables you to adjust the sound without degrading the sound quality. Different modes will give you different feel of size and type of listening environment.

Night Mode

By using Dynamic Range Compression technology, you can enjoy enhanced sound quality by Dolby Digital at night without interrupting your roommates or neighbors. While enjoying a Dolby Digital enabled component (DVD, SAT), you can activate Night Mode by pressing **NIGHT** button at the front of the receiver, and this mode will compress the difference in volume between normal voices and sounds like explosions. There are two modes (**SOFT, SOFTER**) for you to choose the extents of compression.

Fine Setting of the Components

Input IQ

One of the smartest features of the receiver is the ability to pre-select the best surround mode for you once you turn on the unit by pressing the Source Buttons (like DVD, SAT, CD) directly. The default surround modes for different components are as table below. If you decide to change the surround mode, you can press the **SURR MODE** button to change to the mode you want.

Source/ Input	If Digital Input (optical or coaxial) is selected	If Analog Input is selected
DVD	Dolby Digital	PRO LOGIC
SAT	Dolby Digital	PRO LOGIC
VCR1	N/A	PRO LOGIC
VCR2	N/A	PRO LOGIC
TV	N/A	PRO LOGIC
CD	STEREO	STEREO
TAPE	N/A	STEREO
TUNER	N/A	STEREO

Input Signal Setting

The receiver has defaulted to the most convenient settings for your easiest use (see table).

If your connection is different from the default setting, you can press **SET/DEMO** and then rotate **MULTI**

JOG to toggle among optical/ coaxial/ analog to match your connection. Your selection will be stored automatically.

Every time you press the source button, the input setting (e.g. DVD/ OPTI) will be shown on display for a few seconds to refresh your memory.

SOURCE	DEFAULT INPUT (as seen on display)
SAT	Coaxial (SAT/ COAX)
DVD	Optical (DVD/ OPTI)
CD	Optical (CD/ OPTI)
VCR1	Analog (VCR1/ ANL)
VCR2	Analog (VCR2/ ANL)
FM/AM	Built-in Tuner
TAPE	Analog (TAPE/ ANL)

Fine Setting of the Speakers

This receiver supports a wide range of speakers and subwoofers. For optimal surround sound enjoyment, you need to register the speaker selection settings of your audio system. If you buy this receiver with accompanied speaker package, then this step has been done for you.

Also, to make the surround sound more effective and suit the acoustic conditions in your listening room, you need to delay the signal from some of the speakers. Such channel delay compensates for center or surround speakers that are closer to listening position than the front speakers. You can make use of the **TEST/ SET UP** button to control the speakers such as their relative loudness.

The TEST/ SET UP button

You can adjust the relative loudness of the individual speakers by **TEST/ SET UP** button. In Dolby modes, press the button briefly. A short noise will be heard in the speakers one by one. The speaker having the noise at that moment will be shown in the display. You can listen to that speaker and rotate the **MULTI JOG** to adjust the level.

Speaker Configurations

You can also change the setup of the speakers by pressing the **TEST/ SET UP** button until the display shows **I/R** **IR** which enables you to set the volume size of the front speaker.

Advanced Sound Control

Front Speaker selection	Large/ Small
Center Speaker selection	Large/ Small/ None
Surround Speaker selection	Large/ Small/ None
Subwoofer selection	Yes/ No
Subwoofer Phase	+ / -
Front Speaker distance	0-40 ft
Centre Speaker distance	0-40 ft
Rear Speaker distance	0-40 ft

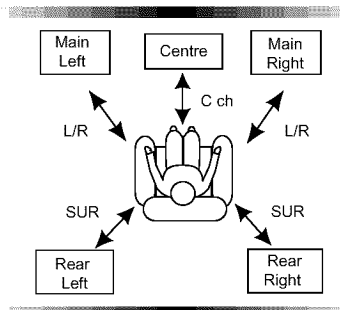
By pressing the button repeatedly while display is still showing **L/R** **IRG**, the display will toggle among: front, center, surround, subwoofer, subwoofer phase and speakers' distance setup. You can now set the volume size or speakers' distance by rotating the **MULTI JOG**.

Note:

- The sub-woofer selection will always be YES when the main speakers are set to small (SML).
- For the subwoofer phase setting, it will be affected by how you locate the subwoofer. Try both + and - settings and select the one that has better bass effect.

Speaker Distance

To make the surround sound more effective and suit the acoustic conditions in your listening room, you need to input the distance of the speakers measured from your favourite listening position. The receiver will adjust the appropriate delay compensation for you.



Note: The receiver has defaulted the following distances:

- Main speakers (L/R) 15 ft
- Center speaker (Cch) 15 ft
- Rear speaker (SUR) 10 ft

Speaker Icons

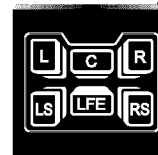
The receiver shows you the speakers' types and settings on the display with the following icons:



Displaying Program Formats

When a digital source is playing, the receiver will automatically switch to the proper surround mode and indicates on the speaker icons on the right-hand side of the display. (See diagram)

It is important to note, however, that not all Dolby Digital sources are encoded with the full complement of five channels plus LFE*. Speaker icons show how many and which speaker you have enabled (See "Fine Setting of the Speakers") and the letters inside the speaker icons show which channel is present in the source information. For example, the diagram shown means you have all the five speakers and subwoofer enabled and the digital sources you played have five channels plus LFE complemented.



* LFE stands for Low Frequency Effect. The indication "LFE" appears if the digital source contains LFE information. In this case, the bass signal will be delivered to the subwoofer, offering more dynamic deep bass sound effects. If the letter is flashing, the signal is either too weak or just gone.

Care and Maintenance

EN

Troubleshooting Tips

Receiver/Tuner Operation

STEREO indicator is off.

- Adjust the antenna.

The signal is Mono. Severe hum or noise.

- The signal is too weak. Connect an external antenna.

Remote Control Operation

The remote control does not operate the unit.

- Another function mode is selected on the remote. Press the correct Source Button.
- No batteries installed. (included with your system) Install the batteries before attempting to operate the remote. Be sure to match the + and - ends of each battery to the symbols shown in the remote battery compartment.
- The batteries are weak. Replace all batteries.
- The remote is not pointed at the remote control sensor on the main unit or there is an obstacle between the remote and the main unit.
- The remote control is too far from the main unit, move closer.

General

No audio.

- Make sure the speakers are connected.
- Check the connections.
- Check the power cord connections.
- Make sure the **MUTE** indicator on the front panel is off.
- Make sure the digital setting (optical, coaxial or analog) is correct.

No audio from one channel.

- Check the speaker level setting.
- Check the speaker wire or cable connections.

Noise creates when the TV is turned on.

- The TV is too close to the audio system.

Specific instruments sound displaced.

- Check the connections between the receiver and the speakers if the sound does not match the video.
- Press the Source Button for the video source.

Cleaning the Exterior

- Disconnect the system from AC power before cleaning the exterior of the system with a soft dust cloth, or with a slightly humid chamois leather. Never use strong solvents.

Equipment Specifications:

AMPLIFIER SECTION:

All 5 channels: each 50W at 6 ohm.

0.9% THD @1 kHz

Subwoofer channel: 100w at 3 ohm (RT2250 only)

Muting Attenuation: 65dB

Frequency Response: 40Hz to 20kHz +/-3dB

Signal to Noise Ratio: 65dB (Bypass mode)

VIDEO SECTION:

Input (Sensitivity/ Impedance): 1Vp-p/ 75ohm

Output (Level/ Impedance): 1Vp-p/ 75 ohm

Frequency Response: 10Hz to 6MHz at +/- 3dB

Signal to noise ratio: 40dB

Crosstalk @3.58MHz: 40dB

AM TUNER SECTION:

Frequency Response: 80Hz - 2kHz +/-6dB

Usable Sensitivity: 800uV/m @ S/N 20dB

Signal to Noise: 38dB

Image Ratio: 27dB @ 1000kHz

IF Rejection: 35dB

FM TUNER SECTION:

Frequency Response: 40Hz - 15kHz +/-3dB

Quieting: 24dBu

Signal to Noise: 60dB(stereo)/ 65dB(mono)

Image Ratio: 40dB

IF Rejection: 50dB

Remote Codes

CABLE CODES

ABC	5002, 5003, 5004, 5005, 5006, 5009, 5053
ANTRONIX	5008, 5009
ARCHER	5008, 5009, 5010, 5011
CABLETENNA	5008
CABLEVIEW	5008
CENTURY	5011
CITIZEN	5011
COLOUR VOICE	5012, 5013
COMTRONICS	5014, 5015
CONTEC	5016
EASTERN	5017
GARRARD	5011
GC ELECTRONICS	5009
GEMINI	5018, 5019, 5049
GENERAL INSTRUMENT	5003
HAMLIN	5020, 5021, 5022, 5035, 5045
HITACHI	5003
HYTEX	5002
JASCO	5011
JERROLD	5003, 5005, 5007, 5018, 5023, 5024, 5046, 5053
MAGNAVOX	5025
MEMOREX	5026
MOVIE TIME	5002, 5027, 5028
NSC	5002, 5027, 5028
OAK	5002, 5016, 5029
PANASONIC	5048, 5052
PARAGON	5026
PHILIPS	5011, 5012, 5013, 5019, 5025, 5030, 5031, 5032
PIONEER	5033, 5034
PULSAR	5026
RCA	5047, 5049, 5052
REALISTIC	5009, 5049
REGAL	5022, 5035
REGENCY	5017
REMBRANDT	5003
RUNCO	5026
SAMSUNG	5014, 5034
SCIENTIFIC ATLANTA	5006, 5036, 5037, 5038
SIGNAL	5014, 5018
SIGNATURE	5003
SL MARX	5014
SPRUCER	5052
STARCOM	5007, 5018, 5053
STARGATE	5014, 5018
STARQUEST	5018
TANDY	5040
TELEVIEW	5014
TOCOM	5004, 5023, 5041
TOSHIBA	5026
TUSA	5018
TV86	5027
UNIKA	5008, 5009, 5011
UNITED ARTISTS	5002
UNITED CABLE	5053
UNIVERSAL	5008, 5009, 5010, 5011
VIEWWAY	5044
VIEWSTAR	5015, 5025, 5027, 5040
ZENITH	5026, 5050, 5051

VCR CODES

ADMIRAL	2131
ADVENTURA	2026
AIKO	2027
AIWA	2002, 2026
AKAI	2003, 2004, 2005, 2007, 2008, 2111, 2112, 2113
AMERICAN HIGH	2021
ASHA	2013
AUDIO DYNAMICS	2009, 2010
AUDIOVOX	2014
BELL & HOWELL	2011
BEAUMARK	2013
BROKSONIC	2012, 2025
CALIX	2014
CANDLE	2013, 2014, 2015, 2016, 2017, 2018, 2019
CANON	2021, 2022, 2114
CAPEHART	2020, 2110
CARVER	2062
CCE	2027, 2061
CITIZEN	2013, 2014, 2015, 2016, 2017, 2018, 2019, 2027
COLORTYME	2009
COLT	2061
CRAIG	2013, 2014, 2023, 2061
CURTIS-MATHES	2000, 2002, 2009, 2013, 2016, 2018, 2021, 2022, 2024, 2115
CYBERNEX	2013
DAEWOO	2015, 2017, 2019, 2025, 2026, 2027, 2028, 2110
DAYTRON	2110
DBX	2009, 2010
DIMENSIA	2000
DYNATECH	2002, 2026
ELECTROHOME	2014, 2029
ELECTROPHONIC	2014
EMERSON	2002, 2012, 2014, 2015, 2021, 2024, 2025, 2026, 2029, 2030, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2044, 2045, 2047, 2065, 2105, 2113, 2116, 2117, 2130
FISHER	2011, 2023, 2048, 2049, 2050, 2051, 2052, 2118
FUJI	2021, 2119
FUNAI	2002, 2026
GARRARD	2026
GE	2000, 2001, 2013, 2021, 2022, 2053, 2115, 2120
GOLDSTAR	2009, 2014, 2018, 2054, 2121
GRADIENTE	2026
HARLEY DAVIDSON	2026
HARMAN KARDON	2009
HARWOOD	2061
HEADQUARTER	2011
HITACHI	2002, 2055, 2056, 2057, 2107, 2111, 2120, 2122
HI-Q	2023
INSTANT REPLAY	2021
JCI	2021
JC PENNEY	2009, 2010, 2011, 2013, 2014, 2021, 2022, 2055, 2056, 2058, 2059, 2060, 2107, 2118
JENSEN	2055, 2056, 2111
JVC	2009, 2010, 2011, 2018, 2058, 2111, 2123
KENWOOD	2009, 2010, 2011, 2016, 2018, 2058, 2111, 2123
KLH	2061
KODAK	2014, 2021
LLOYD	2002, 2026
LOGIK	2061
LXI	2014
MAGNAVOX	2021, 2022, 2062, 2063, 2104, 2108, 2124
MAGNIN	2013
MARANTZ	2009, 2010, 2011, 2016, 2018, 2021, 2058, 2062, 2064
MARTA	2014
MASUSHITA	2021
MEI	2021

EN

Remote Codes

EN

MEMOREX 2002, 2011, 2013, 2014, 2021, 2023, 2026, 2104, 2131
 MGA 2029, 2065, 2113
 MGN TECHNOLOGY 2013
 MIDLAND 2053
 MINOLTA 2055, 2056, 2107
 MITSUBISHI 2029, 2055, 2056, 2065, 2066, 2067, 2069, 2070, 2071, 2072, 2073, 2074, 2106, 2113, 2123
 MONTGOMERY WARD 2075, 2131
 MOTOROLA 2021, 2131
 MTC 2002, 2013, 2026
 MULTITECH 2002, 2013, 2016, 2026, 2053, 2061
 NEC 2009, 2010, 2011, 2016, 2018, 2058, 2064, 2076, 2078, 2079, 2111, 2123
 NIKKO 2014
 NOBLEX 2013
 OLYMPUS 2021
 OPTIMUS 2014, 2131
 OPTONICA 2096
 ORION 2035
 PANASONIC 2021, 2022, 2109, 2125, 2126, 2127
 PENTAX 2016, 2055, 2056, 2107, 2120
 PENTEX RESEARCH 2018
 PHILCO 2021, 2022, 2062, 2063
 PHILIPS 2021, 2062, 2096, 2124
 PILOT 2014
 PIONEER 2010, 2055, 2080, 2081, 2123
 PORTLAND 2016, 2017, 2019, 2110
 PROSCAN 2000, 2001
 PROTEC 2061
 PULSAR 2104
 QUARTER 2011
 QUARTZ 2011
 QUASAR 2021, 2022, 2125
 RCA 2000, 2001, 2003, 2013, 2021, 2055, 2056, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2107, 2115, 2120, 2125
 RADIOSHACK/REALISTIC 2002, 2011, 2013, 2014, 2021, 2022, 2023, 2026, 2029, 2049, 2050, 2096, 2131
 RADIX 2014
 RANDEX 2014
 RICOH 2128
 RUNCO 2104
 SAMSUNG 2005, 2013, 2015, 2033, 2053, 2112
 SANKY 2104, 2131
 SANSUI 2010, 2092, 2111, 2123
 SANYO 2011, 2013, 2023
 SCOTT 2012, 2015, 2025, 2032, 2035, 2038, 2065, 2093, 2116
 SEARS 2011, 2014, 2021, 2023, 2048, 2049, 2050, 2051, 2055, 2056, 2107, 2118
 SHARP 2002, 2017, 2029, 2094, 2095, 2096, 2131
 SHINTOM 2004, 2056, 2061, 2098
 SHOGUN 2013
 SIGNATURE 2002, 2131
 SINGER 2021, 2061, 2128
 SONY 2002, 2004, 2098, 2099, 2119, 2128
 STS 2021, 2107
 SYLVANIA 2002, 2021, 2022, 2026, 2062, 2063, 2065, 2124
 SYMPHONIC 2002, 2026
 TANDY 2002, 2011
 TASHIKO 2014
 TATUNG 2058, 2111
 TEAC 2002, 2026, 2058, 2085, 2111
 TECHNICS 2021, 2109
 TEKNIKA 2002, 2014, 2021, 2026, 2100, 2129
 TMK 2013, 2024, 2047
 TOSHIBA 2015, 2049, 2051, 2055, 2065, 2093, 2116
 TOTEVISION 2013, 2014
 UNITECH 2013
 VECTOR RESEARCH 2009, 2010, 2015, 2016
 VICTOR 2010
 VIDEO CONCEPTS 2009, 2010, 2015, 2016, 2113
 VIDEOSONIC 2013
 WARDS 2002, 2013, 2014, 2015, 2021, 2023, 2026, 2029, 2055, 2056, 2061, 2096, 2101, 2102, 2103, 2107, 2116, 2131

XR-1000 2021, 2026, 2061
 YAMAHA 2009, 2010, 2011, 2018, 2058, 2111
 ZENITH 2004, 2098, 2104, 2119, 2128

TV CODES

ABEX 1172
 ADMIRAL 1001, 1173
 ADVENTURA 1174
 AIKO 1016
 AKAI 1002
 ALLERON 1046
 AMTRON 1038
 ANAM NATIONAL 1003, 1038
 ACC 1004, 1005, 1006, 1007, 1175, 1176
 AUDIOVOX 1038
 BELCOR 1004
 BELL & HOWELL 1001, 1083, 1162
 BRADFORD 1038
 BROKWOOD 1004
 CANDLE 1004, 1006, 1008, 1174
 CAPEHART 1175
 CELEBRITY 1002
 CENTURION 1009
 CITIZEN 1004, 1006, 1008, 1016, 1038, 1105, 1171, 1174, 1177
 CLAIRTONE 1176
 COLORTYME 1004, 1006
 CONCERTO 1004, 1006
 CONTEC/CONY 1012, 1013, 1014, 1038, 1176
 CRAIG 1038
 CROWN 1038, 1171
 CURTIS MATHES 1000, 1004, 1006, 1015, 1105, 1162, 1171
 CXC 1038
 DAEWOOD 1004, 1005, 1006, 1016, 1017, 1018, 1127, 1171
 DAYTRON 1004, 1006, 1171
 DIMENSIA 1000
 DUMONT 1004, 1151
 DYNATECH 1178
 ELECTROBAND 1002, 1176
 ELECTROHOME 1003, 1004, 1006, 1019, 1022
 EMERSON 1004, 1006, 1012, 1014, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1041, 1042, 1043, 1044, 1046, 1047, 1123, 1124, 1162, 1171, 1176, 1177, 1179, 1191
 ENVISION 1004, 1006
 FISHER 1048, 1049, 1050, 1051, 1162, 1180
 FUJITSO 1046
 FUNAI 1038, 1046
 FUTURETEC 1038
 GE 1000, 1003, 1004, 1006, 1022, 1052, 1054, 1055, 1087, 1164, 1165, 1166, 1167, 1168, 1181
 GIBRALTER 1004, 1151
 GOLDSTAR 1004, 1005, 1006, 1012, 1019, 1056, 1057, 1058, 1155, 1156, 1171, 1172
 GRUNDY 1038, 1046, 1171
 HALLMARK 1004, 1006
 HARVARD 1038
 HITACHI 1004, 1006, 1012, 1013, 1059, 1060, 1061, 1135, 1136, 1137, 1138, 1139, 1140, 1141, 1142, 1143, 1144, 1145, 1146, 1148, 1150, 1179
 IMA 1038
 INFINITY 1062
 JANEIL 1174
 JBL 1062
 JCB 1002
 JC PENNY 1000, 1004, 1005, 1006, 1008, 1022, 1052, 1054, 1058, 1063, 1064, 1072, 1087, 1105, 1128, 1171, 1172, 1181
 JENSEN 1004, 1006
 JVC 1012, 1013, 1054, 1060, 1065, 1066, 1067, 1089, 1157, 1158, 1159, 1182

Remote Codes

KAWASHO	1002, 1004, 1006
KAYPANI	1175
KENWOOD	1004, 1006, 1019
KLOSS NOVABEAM	1068, 1069, 1174, 1183
KTV	1038, 1070, 1171, 1176, 1177
LOEWE	1062
LOGIK	1083
LUXMAN	1004, 1006
LXI	1000, 1006, 1049, 1062, 1071, 1072, 1073, 1162, 1181
MAGNAVOX	1004, 1006, 1008, 1019, 1062, 1068, 1069, 1074, 1075, 1076, 1077, 1088, 1089, 1130, 1131, 1132, 1133, 1134, 1183, 1184
MAJESTIC	1083
MARANTS	1062
MARANTZ	1004, 1006, 1062, 1078
MEGATRON	1006, 1059
MEI	1176
MEMOREX	1001, 1006, 1082, 1083, 1162
MGA	1004, 1005, 1006, 1019, 1022, 1051, 1079, 1080, 1082
MIDLAND	1054, 1151, 1171, 1172, 1181
MINUTZ	1052
MITSUBISHI	1004, 1005, 1006, 1019, 1022, 1051, 1079, 1080, 1081, 1082, 1082, 1083, 1125
MONTGOMERY WARD	1083
MOTOROLA	1003, 1173
MTC	1004, 1005, 1006, 1105, 1176, 1178
MULTITECH	1038, 1178
MULTIVISION	1084
NAD	1006, 1071, 1072, 1185
NEC	1003, 1004, 1005, 1006, 1089
NIKKO	1006, 1016
NTC	1016
ONWA	1038
OPTIMUS	1185
OPTONICA	1095, 1173
ORION	1035, 1191
PANASONIC	1003, 1054, 1062, 1170
PHILCO	1003, 1004, 1005, 1006, 1008, 1012, 1019, 1062, 1068, 1069, 1074, 1075, 1077, 1183, 1184
PHILIPS	1003, 1004, 1008, 1012, 1019, 1062, 1068, 1069, 1074, 1075, 1076, 1086, 1087, 1088, 1089
PILOT	1004, 1171
PIONEER	1004, 1006, 1090, 1091, 1092, 1179, 1185
PORTLAND	1004, 1005, 1006, 1016, 1171
PRICE CLUB	1105
PRISM	1054
PROSCAN	1000, 1181
PROTON	1004, 1006, 1012, 1093, 1175
PULSAR	1151
PULSER	1004
QUASAR	1003, 1054, 1070, 1094
RADIO SHACK/REALISTIC	1000, 1004, 1006, 1012, 1038, 1049, 1095, 1162, 1171, 1172
RCA	1000, 1003, 1004, 1005, 1006, 1007, 1019, 1096, 1098, 1099, 1100, 1101, 1102, 1103, 1129, 1179, 1181, 1187, 1188, 1190
RHAPSODY	1176
RUNCO	1151
SAMPO	1004, 1006, 1171, 1172, 1175
SAMSUNG	1004, 1005, 1006, 1012, 1015, 1019, 1104, 1105, 1106, 1171, 1172
SAMSUX	1171
SANSUI	1191
SANYO	1004, 1048, 1049, 1050, 1080, 1107, 1108, 1162, 1169, 1180, 1189
SCOTCH	1006
SCOTT	1004, 1006, 1012, 1024, 1035, 1038, 1046
SEARS	1000, 1004, 1006, 1013, 1019, 1046, 1048, 1049, 1050, 1051, 1066, 1071, 1072, 1109, 1110, 1162, 1180, 1181, 1189
SHARP	1004, 1006, 1012, 1029, 1095, 1111, 1112, 1113, 1122, 1171, 1173
SHOGUN	1004
SIGNATURE	1001, 1083, 1115

SIMPSON	1008
SONIC	1176
SONY	1002
SOUNDESIGN	1004, 1006, 1008, 1038, 1046
SQUAREVIEW	1189
SSS	1004, 1038
STARLITE	1038
SUPRE-MACY	1174
SUPREME	1002
SYLVANIA	1004, 1006, 1008, 1019, 1062, 1068, 1069, 1074, 1075, 1076, 1077, 1088, 1116, 1161, 1183, 1184
SYMPHONIC	1033, 1038, 1189
TANDY	1173
TATUNG	1003, 1178
TECHNICS	1054
TECHWOOD	1004, 1006, 1054
TEKNIKA	1004, 1005, 1006, 1008, 1012, 1013, 1016, 1038, 1046, 1076, 1082, 1083, 1105, 1170, 1171
TELECATION	1117
TMK	1004, 1006
TOSHIBA	1049, 1071, 1072, 1089, 1105, 1109, 1117, 1118, 1160, 1162
TOTEVISION	1171
UNIVERSAL	1052, 1087
VICTOR	1066, 1182
VIDTECH	1004, 1005, 1006
VIKING	1174
WARDS	1000, 1001, 1004, 1005, 1006, 1019, 1024, 1033, 1046, 1052, 1062, 1069, 1074, 1075, 1076, 1083, 1087, 1088, 1095, 1119, 1120, 1184
YAMAHA	1004, 1005, 1006, 1019
ZENITH	1004, 1083, 1151, 1152, 1153, 1154

Satellite Receivers

CHAPPARAL	5056, 5057
DRAKE	5058, 5059
GE SATELLITE RECEIVER	5000, 5001
GENERAL INSTRUMENTS	5060, 5061, 5062
PANASONIC SATELLITE RECEIVER	5075
PRIMESTAR DBS	5076
PROSCAN SATELLITE RECEIVER	5000, 5001
RCA SATELLITE RECEIVER	5000, 5001
REALISTIC	5063
SONY SATELLITE RECEIVER	5072
STS1	5064
STS2	5065
STS3	5066
STS4	5067
TOSHIBA	5068
TOSHIBA SATELLITE RECEIVER	5073
UNIDEN SATELLITE RECEIVER	5069

Audio (RCA/Dimensia only)

AM/FM	4003
AUX	4004
PHONO	4005
CD	4007
TAPE	4006

Laserdisc Players

PROSCAN	2001
RCA	2001

EN

Index

EN

A

Accessories included 3
 AM antenna (see Antenna) 5
 ANT•FMS button 9
 Antenna
 AM antenna 5
 FM antenna 5
 ARENA button (see DSP mode) 8, 9
 Audio codes 18

B

Basic controls of the remote 9
 Batteries 2
 Brightness of display 8

C

Care and maintenance 14
 CD button (see Function buttons) 8, 9
 Center speaker distance 13
 Cleaning the exterior 14
 Channel buttons (CH+, CH-) 9
 CHURCH button (see DSP mode) 8, 9
 CONCERT button (see DSP mode) 8, 9
 Connecting the Antennas 5
 Connecting components
 CD 4
 SAT 4
 DVD 4
 Monitor 4
 TV 4
 Tape Deck 4
 VCR 4
 Connecting the speakers 5
 Connecting the subwoofer 5

D

Demo Mode 7
 DIGITAL button 9
 Digital camera 8
 Digital Sound Processor (DSP) Mode 8, 9
 Displaying program formats 13
 DIM selection 8
 Display 8
 Dolby 3 Stereo 11
 Dolby Digital 11
 Dolby Pro Logic 11
 DSP mode 12
 SAT button (see Function buttons) 8, 9
 DVD button (see Function buttons) 8, 9

E

Equipment specifications 14

F

Family game machines 8
 FM antenna (see Antenna) 5
 FORWARD button (see Operation buttons) 9
 Function buttons
 AM•FM button 8, 9
 CD button 8, 9
 SAT button 8, 9
 DVD (DVD•6CH) button 8, 9

SAT (SAT•6CH) button 8, 9
 TAPE button 8, 9
 TV button 8, 9
 VCR 1 button 8, 9
 VCR 2 button 8, 9

G

GO BACK•DISK button 9
 GUIDE•RDM•PTY button 9

H

Headphones (see Phones) 7, 8

I

INPUT•SEEK button 9
 Input IQ 12
 Input Signal Setting 12

L

LEVEL button 9
 Low Frequency Effect (LFE) 13

M

MENU button 9
 MULTI JOG 8
 MUTE button 8, 9

N

Number buttons 9
 Night Mode 8, 12

O

ON/OFF button 9
 Operation buttons 9
 FORWARD button 9
 PAUSE button 9
 PLAY button 9
 RECORD button 9
 REVERSE button 9
 STOP button 9
 Operate your DVD/ CD/ VCR using the Receiver 11
 Output level of speakers (see Sound Control) 8

P

P, SCAN button 8
 PAUSE button (see Operation buttons) 9
 Phones 7, 8
 PLAY button (see Operation buttons) 9
 Preset EQ 8
 Preset stations
 playing 10
 setting 10
 Programming the remote 10

R

Rear Speaker distance 13
 RECORD button (see Operation buttons) 9
 Remote Control
 programming 10
 Remote control buttons 9
 REVERSE button (see Operation buttons) 9

S

S-Video Input 8
 Second VCR 8
 Seek Tuning 10
 Sound Control 8
 Speaker configurations 12
 Speaker distance 12
 Speaker icon 12
 Speaker terminals, matching 5
 Speakers, connecting 5
 Speakers, positioning 6
 Specifications, equipment 14
 STANDBY button 8
 Stations
 preset 8
 recalling 10
 storing in memory 10
 STOP button (see Operation buttons) 9
 Storing stations in memory 9
 Subwoofer, connecting 5
 SURROUND button 8, 9
 Surround channel delay 13
 Surround sound control 9

T

TAPE button (see Source Buttons) 9
 TEST/ SET UP button 8, 12
 THEATER button (see DSP mode) 8, 9
 Troubleshooting tips 15
 TUNER button (see Source buttons) 8, 9
 Tuning Buttons 8
 Tuning the receiver 10
 TV button (see Function buttons) 8, 9

V

VCR1 button (see Function buttons) 8, 9
 VCR2 button (see Function buttons) 8, 9
 VCR2 jack 8
 ventilation 2
 VOL buttons (see Volume buttons) 8, 9
 Volume buttons 8, 9
 Volume knob (see Sound Control) 8

US Warranty

EN

What your warranty covers:

- Any defect in materials or workmanship.

For how long after your purchase:

- One year.
(The warranty period for rental units begins with the first rental or 45 days from date of shipment to the rental firm, whichever comes first.)

What we will do:

- Provide you with a new, or at our option, a refurbished unit.
- The exchange unit is under warranty for the remainder of the original product's warranty period.

How to make a warranty claim:

- Properly pack your unit. Include any cables, etc., which were originally provided with the product. We recommend using the original carton and packing materials.
- Include in the package evidence of purchase date such as the bill of sale. Also print your name and address and a description of the defect. Send standard UPS or its equivalent to:

**Thomson Consumer Electronics, Inc.
Product Exchange Center
11721 B Alameda Ave.
Socorro, TX 79927**

- Pay any charges billed to you by the Exchange Center for service not covered by the warranty.
- Insure your shipment in case of loss of damage. Thomson accepts no liability in case of damage or loss.
- A new or refurbished unit will be shipped to you prepaid freight.

What your warranty does not cover:

- Customer instruction. (Your Owner's Manual provides information regarding operating instructions and user controls. For additional information, ask your dealer.)
- Installation and set-up service adjustments.
- Batteries.
- Damage from misuse or neglect.
- Products which have been modified or incorporated into other products.
- Products purchased or serviced outside the USA.
- Acts of God, such as but not limited to lightning damage.

Product Registration:

- Please complete and mail the Product Registration Card packed with your unit. It will make it easier to contact you should it ever be necessary. The return of the card is not required for warranty coverage.

How state law relates to this warranty:

- This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

If you purchased your product outside the USA:

- This warranty does not apply. Contact your dealer for warranty information.

Canadian Warranty

EN

Thomson Consumer Electronics Canada, Inc. warrants to the purchaser or gift recipient that if any manufacturing defect becomes apparent in this product within 1 year from the original date of purchase, it will be replaced free of charge, including return transportation.

This warranty does not include damage to the product resulting from accidents, misuse or leaking batteries. Should your product not perform properly during the warranty period, either:

1. Return it to the selling dealer with proof of purchase for replacement,
- OR
2. Remove the batteries (where applicable), and pack product complete with accessories in the original carton (or equivalent).

— Mail prepaid (with proof of purchase) and insured to:

Thomson Consumer Electronics Canada, Inc.
Distribution Centre
7400 A Bramalea Road
Mississauga, Ontario L5S 1X1

The provisions of this written warranty are in addition to and not a modification of or subtraction from the statutory warranties and other rights and remedies contained in any applicable legislation, and to the extent that any such provisions purport to disclaim, exclude or limit any such statutory warranties and other rights and remedies, such provisions shall be deemed to be amended to the extent necessary to comply therewith.

If you are unable to find a qualified technician for out of warranty service, you may write to:

Thomson Consumer Electronics Canada, Inc.
P.O. Box 0944
Indianapolis, Indiana, U.S.A., 46206-0944

Attach your sales receipt to this booklet for future reference. This information is required if service is needed during the warranty period.

PURCHASE DATE _____

NAME OF STORE _____

Model Number: RT2250/RT2250R
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